

REMARKS

Entry of the foregoing and reexamination and reconsideration of the subject application, as amended, pursuant to and consistent with 37 C.F.R. § 1.112, are respectfully requested in light of the remarks which follow.

As noted in the Office Action Summary, Claims 1-8 are cancelled and Claims 9-13 are pending.

Applicants have amended Claims 9 and 11. Amendments to Claims 9 and 11 are supported at least by the claims as originally filed and the figure in the specification. Applicants have amended Claims 9 and 11 without prejudice of or disclaimer to the subject matter contained therein. Applicants reserve the right to file continuation and/or divisional applications on any subject matter canceled by way of this or any amendment, although no subject matter is believed to have been canceled by way of the instant amendment.

1. INFORMATION DISCLOSURE STATEMENTS

Applicants note that the IDS Form 1449 was considered on August 24, 2004. For the record, Applicants want the last reference on the form to be initialed to clearly indicate that the reference was considered. Applicants then request that the initialed form be returned with the next paper from the Office. The reference at issue is Asselineau et al., "Human Epidermis Reconstructed by Culture; Is It Normal?" *The Journal of Investigative Dermatology*, 86(2): 181-186 (1986).

2. STATUS OF THE CLAIMS

Claims 1-8 stand cancelled. Claims 9-13 stand rejected. Applicants point out that there is no rejection stated for Claim 12, thus, at best Claim 12 is objected to for depending from a rejected base claim. Accordingly, the Office Action Summary and the Office Action incorrectly lists Claims 9-13 as being rejected.

3. DEPOSIT REQUIREMENT

The Office asserts that the PG4 antibody is required to practice the claimed invention. It further asserts that as a required element, "it must be known and readily

available to the public or obtainable by a repeatable method set forth in the specification. If it is not so obtainable or available, the enablement requirements of 35 USC 112, first paragraph, may be satisfied by a deposit of the cell line/hybridoma which produces this antibody." See Office Action, page 2. The deposit requirement is not set forth as applying to any specific claim. *Id.*

Applicants traverse the rejection that a deposit of the antibody or cell line that produces the PG4 antibody is necessary. Applicants direct the Office's attention to M.P.E.P. § 2404.01. As long as an antibody is known and readily available, no deposit is required. Factors that may be used as indicia that the material is known and readily available to the public includes reference to the material in printed publications. *Id.* Applicants note that the subject antibody is referenced on page 550 of Sorrell et al., *Histochemical Journal* 31: 549-558 (1999) (attached and acknowledged in previously submitted IDS); See section entitled "Monoclonal antibody production." Therefore, Applicants submit that the antibody is known and readily available and no biological deposit is necessary.

4. REJECTION UNDER 35 U.S.C. § 112, FIRST PARAGRAPH (ENABLEMENT)

Claims 9-10 stand rejected under 35 U.S.C. § 112, first paragraph as allegedly lacking enablement. The Office asserts that "there is no guidance or detailed instructions in support of the notion as to quantify an amount of papillary fibroblast population so as to be considered normal skin. More specifically, the only working example demonstrating the labeling of papillary fibroblast in a skin sample is qualitative rather than quantitative" Office Action, at page 3. The Office goes on to assert that allegedly there is no data "supporting the notion that an amount of papillary fibroblast is considered normal skin reflecting by the binding of PG4 antibody." Accordingly, the Office concludes that undue experimentation is allegedly required to practice the claimed methods with a reasonable expectation of success.

Applicants traverse the rejection. To adduce a case that the claims lack sufficient enablement, the Office has the burden to evince that the claimed invention is not enabled. This burden has not been met. The test of enablement is whether the experimentation required is undue or unreasonable. See M.P.E.P. § 2164.01. A

patent need not teach and preferably omits what is well known in the art. *Id.* Determining enablement is a question of law based on underlying factual findings. The undue experimentation factors are from *In re Wands*, 858 F.2d 731, 737, 8 U.S.P.Q.2d 1400 (Fed. Cir. 1988). "The examiner's analysis must consider ***all the evidence related to each of these factors***, and any conclusion of nonenablement must be based on the ***evidence as a whole***." *Wands*, 858 F.2d at 737, 740, 8 U.S.P.Q.2d 1404, 1407. (Emphasis added). No analysis was made. Only a recitation of the Wands factors was provided.

On page 3 of the Office Action, the eight Wands factors are recited, but a complete analysis of each of the Wands factors with a weighing of the evidence ***as a whole*** is not performed. See M.P.E.P. § 2164.01(a). For example, it is asserted that there is a lack of predictability in the art, but there is no reasoning or argumentation provided in support of this conclusion. Office Action, page 3, last paragraph. The nature of the invention, the state of the prior art, the predictability of the art, the quantity of experimentation, and the breadth of the claims were not analyzed. Additionally, when making an assertion of lack of enablement, the Office should specifically identify what information is missing and why one skilled in the art could not supply the information without undue experimentation. References should also be supplied if possible to support a *prima facie* case of lack of enablement. See M.P.E.P. § 2164.04, which refers to M.P.E.P. § 2164.06(a). Applicants point out that lack of enablement should never be determined based on personal opinion. See M.P.E.P. § 2164.05. Yet, no evidence was provided in support of the conclusion that the claimed invention would have required undue experimentation and appears to rely only on opinion. Thus, a *prima facie* case of lack of enablement has not been adduced.

In any event, Applicants have amended Claim 9, and thereby dependent Claim 10. Applicants point out that the skin sample or sample of skin equivalent is being labeled with at least one antibody, wherein the at least one antibody is an anti-PG4 monoclonal antibody. This antibody can discriminate and bind to papillary fibroblasts. Figure 1 of the specification provides an example of what a sample of normal skin labeled with the PG4 mouse monoclonal antibody looks like. An artisan

of ordinary skill, in view of the teachings of the specification, would therefore understand what whether the skin sample or the sample of skin equivalent appears similar to what is observed in Figure 1. Alternatively, the skilled artisan would have known at the time in view of the teachings of the specification how to run a control experiment with a piece of normal skin with which to compare to the skin sample or sample of skin equivalent. Accordingly, Claim 9 (and dependent Claim 10) as amended are adequately enabled in view of the teachings of the specification and what was known in the art at the time.

Thus, had a *prima facie* case of lack of enablement been adduced, it is mooted. However, as asserted above the Office has not met its burden, and the rejection should accordingly be withdrawn.

5. REJECTION UNDER 35 U.S.C. § 112, FIRST PARAGRAPH (WRITTEN DESCRIPTION)

Claims 9-10 stand rejected as failing to comply with the written description requirement. Specifically, the Office states that "skilled artisan cannot envision the detailed 'an amount of papillary fibroblast population so as to be considered normal', and therefore conception is not achieved until reduction to practice has occurred ..." Office Action, page 4.

Applicants traverse the rejection to the extent it applies to either amended Claim 9 (and Claim 10) or as it applies to the unamended claims. The Office has failed to set forth a *prima facie* case of lack of written description. The Office bears the initial burden of presenting a *prima facie* case of unpatentability, given that there is a strong presumption that an adequate written description of the claimed invention is present when the application is filed. See M.P.E.P. § 2163 paraphrasing *In re Wertheim*, 541 F.2d 257, 263, 191 U.S.P.Q. 90, 97 (C.C.P.A. 1976). This burden may be met by evidence that one skilled in the art would fail to "recognize in the disclosure a description of the invention defined by the claims." *In re Alton*, 76 F.3d 1168, 1175, 37 U.S.P.Q.2d 1578, 1583 (Fed. Cir. 1996). The Office must explain *why* a person skilled in the art would not recognize that the inventor had possession of the claimed subject matter at the time the application was filed. *Id.*, at 1176, 37

U.S.P.Q.2d 1584. This explanation must be provided from the standpoint of one of skill in the art at the time the application was filed. M.P.E.P. § 2163.

The Office has merely asserted the conclusion that "the skilled artisan cannot envision the detailed 'an amount of papillary fibroblast population so as to be considered normal', and therefore conception is not achieved until reduction to practice has occurred, regardless of the complexity or simplicity of the method of isolation." Office Action, at page 4. Applicants direct the Office's attention to M.P.E.P § 2163, Section III, A. Only the limitation at issue was pointed out. Part B of the requirement set forth in that section was not set forth. Namely, the explanation of *why* the skilled artisan at the time would have failed to recognize that the inventor had possession. General allegations are insufficient. Accordingly, the Office failed to adduce a *prima facie* case of lack of written description. Applicants respectfully request that the rejection be withdrawn.

6. REJECTION UNDER 35 U.S.C. § 112, SECOND PARAGRAPH

Claims 9-13 stand rejected under 35 U.S.C. § 112, second paragraph as indefinite. Claim 9 stands rejected as indefinite for recitation of "an amount of papillary fibroblast population so as to considered normal skin". Claim 9 is further rejected for recitation of "evaluating any labeling".

Claim 10 is rejected as allegedly indefinite for recitation of "labeling is present at the upper demis at the level of the epidermis." Claim 13 stands rejected for "the same problem."

Claim 11 stands rejected for recitation of "evaluating any labeling".

Claim 12

Applicants traverse the rejection. First, Applicants point out that there is no rejection of Claim 12. Therefore, other than depending from an otherwise rejected claim, Claim 12 appears free not only of rejections under 35 U.S.C. § 112, second paragraph, but also first paragraph. Thus, Claim 12 appears to be allowable but for depending from a rejected claim. Applicants respectfully request that the status of Claim 12 be revised in the next Office Action to reflect the appropriate status.

Claim 9

Claim 9 was rejected for the recitation of "an amount of papillary fibroblast population so as to considered normal skin." The phrase allegedly is indefinite because it is "not clear what constitutes a normal skin with respect to the amount of papillary fibroblast population." Claim 9 has been amended such that the phrase is no longer recited, thereby mooting the rejection.

Claim 9 was also rejected for the recitation of "evaluating any labeling". The phrase has been deleted thereby mooting the rejection. Applicants respectfully request that the rejection accordingly be withdrawn.

Claims 10 & 13

Applicants traverse the rejection of Claims 10 and 13 for their recitation of "labeling is present at the upper demis [*sic*] at the level of the epidermis." This language would have been clear to one of skill in the art at the time in view of the teachings of the specification and an understanding of skin anatomy. Namely, the epidermis is the layer of cells that is exposed to the world. It comprises dead cornified cells that offer effective resistance both to passage of fluid through them and to friction. See W. Henry Hollinshead et al., Textbook of Anatomy 141 (4th ed. Philadelphia, 1985); and diagram 9.6 of P.R. Wheater et al., "Functional Histology" 134 (2nd ed. New York, 1987). The dermis is the layer immediately adjacent to the epidermis. *Id.* The portion of the dermis that is proximal to the epidermis is the papillary layer. It is in this upper layer where the papillary fibroblasts are found. It would be evident from the specification and an understanding of skin pathology that the "upper dermis at the level of the epidermis" is the region of the dermis proximal with the epidermis. Applicants submit that the claim is not indefinite, and accordingly the rejection of Claims 10 and 13 should appropriately be withdrawn.

Claim 11

"[E]valuating any labeling" is no longer recited in Claim 11, thereby mooting the rejection. Accordingly, the rejection of Claim 11 should be withdrawn.

CONCLUSION

In view of the foregoing, further and favorable action in the form of a Notice of Allowance is believed to be next in order. Such action is earnestly solicited.

In the event that there are any questions relating to this application, it would be appreciated if the Examiner would telephone the undersigned attorney concerning such questions so that prosecution of this application may be expedited.

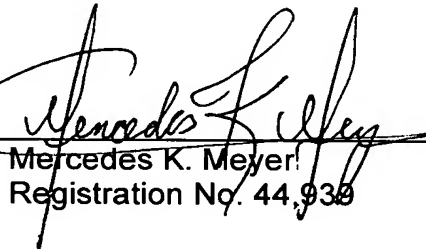
In the event any further fees are due to maintain pendency of this application, the Examiner is authorized to charge such fees to Deposit Account No. 02-4800.

Respectfully submitted,

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